



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,028	11/04/2003	Tim Bianchi	N2215-63142	6162
32009	7590	02/21/2006	EXAMINER	
BRADLEY ARANT ROSE & WHITE LLP			DANG, HUNG Q	
200 CLINTON AVE. WEST			ART UNIT	
SUITE 900			PAPER NUMBER	
HUNTSVILLE, AL 35801			2635	

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

all

Office Action Summary

Application No.

10/701,028

Applicant(s)

BIANCHI ET AL.

Examiner

Hung Q. Dang

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 18-20, 25 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 18-20, 25, 26, 34 and 35 claim “direction of a flow rate”, “detect an absence of a flow rate” and “how long the flow rate has been absent”. Said claim subject matter is not clearly understood because a rate is a scalar value of a magnitude/(unit of time), which does not involve direction.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 7 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Gray et al. U.S. Patent 5,434,911.

Regarding claims 1, 18-20, Gray et al. teaches an apparatus for monitoring a meter, comprising:

A meter (Figure 1, unit 8) that monitor usage of a distribution system;
An electronic data recorder (Figure 1, unit 6) that processes data from the meter;
An external unit (Figure 1, unit 4) that controls the processing of data in the electronic data recorder with a communication protocol; and wherein the communication protocol comprises an initialization signal, an interval identification signal (last paragraph of column 10 "call-in time interval"), and a clock signal (Figure 2a).

Regarding claim 2, the meter disclosed by Gray et al. is also a utility meter (Figure 1, unit 8; and abstract).

Regarding claim 3, Gray et al. also teaches a water meter (column 1, lines 40-45).

Regarding claim 7, Gray et al. also teaches an external meter interface unit.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. U.S. Patent 5,434,911 in view of Hamilton U.S. Patent 6,612,188.

Regarding claim 4, Gray et al. teaches the apparatus of claim 3, except wherein the water meter is self-powered. One skilled in the art would recognize that utility meters have been conventionally designed as self-powered, as evidenced by Hamilton (abstract). Therefore, by conventionality, it would have been obvious to one skilled in the art at the time the invention was made to equip the meter disclosed by Gray et al. as self-powered, as evidenced by Hamilton.

Regarding claims 5 and 6, Hamilton also teaches using Wiegand Wire (last paragraph of column 3).

7. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. U.S. Patent 5,434,911.

Regarding claim 8, even though Gray et al. does not specifically disclose an initialization signal is between 25 and 100 ms in duration, however, one skilled in the art would recognize that such duration could be easily achieved by one skilled practitioner through routine experimentations. Therefore, it would have been obvious to one skilled in the art to provide such duration to the initialization signal disclosed by Gray et al.

Claims 9-12 are rejected for the same reasons as claim 8.

8. Claims 13-16, 23-26, 28, 31, 32, 34, 35 and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. U.S. Patent 5,434,911 in view of Furmidge et al. U.S. Patent 6,952,970.

Regarding claims 13-16, Gray et al. teaches the apparatus as claimed in claim 1, except wherein the electronic data recorder processes data from the meter to detect a leak in the distribution system.

Furmidge et al., in the same field of endeavor, teaches utility meter system, which includes detecting a leak in a distribution system (column 5, lines 31-41).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide leak detection in the distribution system disclosed by Gray et al., as evidenced by Furmidge et al., in order to detect leak in a distribution system.

Claims 23-26, 28, 31, 32, 34, 35, 37 and 40 are rejected for the same reasons as claims 1 and 13.

Claim 38 is rejected for the same reasons as claim 4.

Claim 39 is rejected for the same reasons as claim 5.

9. Claims 17 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. U.S. Patent 5,434,911 in view of Jepson et al. U.S. Patent 4,938,053.

Regarding claims 17 and 33, Gray et al. teaches the apparatus of claim 17, except determining the flow rate in the distribution system.

One skilled in the art would recognize that conventional water/fluid metering systems have been equipped with the capability for measuring flow rate, as evidenced by Jepson et al.

Jepson et al., in the same field of endeavor, teaches metering system, which includes measuring the fluid flow rate of said system (column 4, lines 19-24).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide measuring the flow rate of the system disclosed by Gray et al., as evidenced by Jepson et al., in order to measure the flow rate of the liquid/water in said system.

10. Claims 21, 22, 27 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. U.S. Patent 5,434,911 in view of Holowick U.S. Patent 6,755,148.

Regarding claims 21, 22, 27 and 36, Gray et al. teaches an apparatus of claim 21, except detecting backflow in said distribution system.

Holowick, in the same field of endeavor, teaches a system for monitoring a utility meter, which implicitly suggests detecting backflow of water in said distribution system (column 1 lines 43-50 and column 2, lines 20-27), in order to achieve accurate water consumption readings.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide water backflow detection to the distribution system disclosed by Gray et al., as evidenced by Holowick, in order to achieve accurate water consumption readings.

11. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. U.S. Patent 5,434,911 in view of Furmidge et al. U.S. Patent 6,952,970 and in further view of Holowick U.S. Patent 6,755,148.

Regarding claims 29 and 30, as mentioned above, Gray et al. in view of Furmidge et al. teaches the method of claim 29, except specifically teaching the levels of magnitude of the predefined conditions.

Holowick, in the same field of endeavor, teaches a distribution system, which includes measuring the quantity (levels of magnitude) of water moving through a water meter (column 2, lines 20-26).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide measuring levels of magnitude (quantity of water flow through a meter) of the water flow through the distribution system disclosed by Gray et al. in view of Furmidge et al., as evidenced by Holowick, in order to measure the quantity of water flow through the meter of the system disclosed by Gray et al. in view of Furmidge et al.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is (571) 272-3069. The examiner can normally be reached on 9:30AM-6PM.

Art Unit: 2635

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (571) 272-3068. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hung Q. Dang
2/13/2006
H.D.

HD

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

